

CLAIMS

What is claimed is:

1. A resorbable, remodelable implant material comprising a sterile, non-crosslinked, decellularized and purified mammalian tissue having a major percentage of its available amine groups alkylated.
- 5 2. A material according to claim 1 wherein the tissue is selected from the group consisting of serous and fibro-serous membranes.
3. A material according to claim 2 wherein the tissue is selected from the group consisting of pericardium, peritoneum, fascia lata, dura mater, dermis and small intestinal submucosa.
- 10 4. A material according to claim 3 wherein the tissue comprises bovine pericardium.
5. A material according to claim 1 wherein the material has been alkylated by an alkylating agent selected from the group consisting of 1,2-epoxy-R compounds where R is an alkyl group up to 6 carbon atoms.
- 15 6. A material according to claim 5 wherein the alkylating agent is propylene oxide.
7. A material according to claim 1 wherein the alkylating agent is methyl glycidyl ether.
8. A material according to claim 1 wherein the material is provided in the form of flat or textured sheets or strips.
- 20 9. A material according to claim 1 wherein the material is adapted for use in a surgical application selected from the group consisting of duraplasty, thoracic, abdominal, urological, ophthalmological, cardiac, and vascular surgery.

10. A process of preparing a resorbable, remodelable implant material according to claim 1, the method comprising the step of treating a biological tissue with an alkylating agent under conditions suitable to alkylate a major percentage of available amine groups in the tissue, and sterilizing the treated tissue for use *in vivo*.

5 11. A process according to claim 10 wherein the cleaned tissue is treated with a base prior to the alkylating step.

12. A process according to claim 10 wherein the alkylating agent is used at a pH of between about 9 and about 11.

13. A process according to claim 10 wherein the concentration of alkylating agent is 10 between about 2% (v/v) and about 5% (v/v).

14. A process according to claim 10 wherein the tissue is exposed to the alkylating agent for at least 48 hours.

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